# Definition

## Project Overview

A key component to any strategic marketing, branding or business growth is market segmentation. The data set analyzed in this Capstone project is a user data collection from a mobile marketplace app for used goods. By segmenting the sellers into multiple groups, the company could provide a better customer support by training support staffs accordingly for each seller group when sellers reach out for assist throughout the process of selling their items.

## Problem Statement

The goal of the project is to segment the sellers into number of groups and determine whether they are top sellers, business sellers or casual sellers.

* Customer segmentation
* Customer churn prediction
* Customer lifetime value forecasting

## Metrics

Clustering 후에 실루엣 coefficient?

# Analysis

## Data Exploration

Zero data 에 관한 설명

The data was fabricated by the provider to only show the aggregated form of sellers’ activities

Histogram for price or item?

Explain abnormalities in data

## Exploratory Visualization

## Algorithms and Techniques

PCA, Feature scaling

## Benchmark

# Methodology

## Data Preprocessing

## Implementation

## Refinement

# Results

## Model Evaluation and Validation

Split data 80/20 (at beginning) and train model with 80% and test model with the rest

## Justification

Use F-score?

# Conclusion

## Free-Form Visualization

## Reflection

## Improvement